RESULTS: An MI in a diabetic patient was 35% more expensive compared to a non diabetic (€7,483 vs. €5,549; p<0.001). In angina and heart failure the difference was less pronounced, nevertheless the cost was respectively 22% and 13% higher (angina: €2,570 vs. €2,101; p=0.01, heart failure: €8,776 vs. €7,757; p<0.001). Stroke was 8% more expensive and TIA 17% more expensive (stroke: €9,508 vs. €8,804; TIA: €4,802 vs. €4,109; both p<0.001). Reason for this higher cost is the longer length of stay varying from 1 day in angina to 3 days in MI. The percentage of women was higher in the diabetic group (50% vs. 47%; p<0.05) and diabetic patients were on average 1.8 years older (72.8 vs. 71.0; p<0.01). A regression analysis learned that age was the most important cost driver for all outcomes and diabetes was an independent driver for MI and stroke. **CONCLUSIONS:** Patients with diabetes do not only have a higher risk of cardiovascular events, in case they have an event this event is significantly more expensive.

PCV33

ECONOMIC BURDEN OF CARDIOVASCULAR DISEASES IN RUSSIAN FEDERATION

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OBJECTIVES: To study the economic burden of cardiovascular diseases (CVD) in Russian Federation in 2006-2009. **METHODS:** The economic burden was calculated by the cost of illness method. The calculations included direct costs of health care system and indirect costs, associated with premature death in working age and disability. We used official statistics of health care resources utilization, associated with CVD (hospital days, outpatients visits, emergency visits), the results of pharmacoepidemiological surveys of CVD, mortality and disability statistics in Russia in 2006-2009. **RESULTS:** The total economic burden of CVD increased from 20.6 billions of euro in 2006 till 26.6 billion of euro in 2009 what was equal to 3.1-2.8% of GDP of Russian Federation. The increasing of the burden was mainly caused by the price increasing and in some degree by the increasing of PCI in CHD patients in recent years. Direct costs accounted 21.3% of total cost of CVD (5.7 billions of euro), indirect costs – 78.7% (20.9 billions of euro) in 2009. Indirect costs mainly consisted of the GDP losses because of premature death of working age men. CHD represented 37.8%, cerebrovascular diseases 17.1 % and hypertension -10.8% of overall CVD costs. In-hospital care represented 47.5% of direct costs, outhospital visits – 21.8%, medication – 20.7%, PCI – 4.1% and emergency care 4.1% of direct costs in 2009, respectively. CHD represented 45.3% of direct cost, because of large duration of hospitalization and PCI costs. **CONCLUSIONS:** CVD is a big public health challenge in Russia. The results of economic burden assessment should help policy makers evaluate policy impact and prioritize expenditures.

PCV34

THE ECONOMIC COST OF ACUTE CORONARY SYNDROME IN TURKEY

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OBJECTIVES: Acute coronary syndrome (ACS) is a major complication of the atherosclerotic process that may lead to myocardial necrosis. It is a medical emergency and requires immediate hospital admission. The aim of the present study was to assess the epidemiology and economic burden of ACS in Turkey, where the population is aging, incidence of cardiovascular diseases tend to increase, yet, knowledge on ACS-related health expenditures are inconclusive. **METHODS:** For this purpose, the 2008 data acquired from 28 hospitals of the Diagnose-Related Group Project were evaluated, accounting for 6.5% of the population. Accordingly, the number of hospitalized patients with an ACS diagnosis in 2008 was 102,677. The majority of patients with ACS were ≥40 years of age, and thus, all statistical analyses were limited to this age group. **RESULTS:** The rate of new ACS admissions was calculated as 444 per 100,000. With the assumption (based on earlier published work) that 1/3 of ACS patients failed to reach health care settings, the prevalence of new ACS cases in the general population was estimated to be 666 per 100,000. The average in-patient fatality rate was 29% (41% for females and 24% for males) among the ≥40 years of age group. The economic burden of ACS in Turkey was 1,778,372,874 USD. The direct cost was 151,261,411 USD, whereas the indirect cost was 1,364,742,497 USD. The cost due to the loss of public tax was 262,368,964 USD. Medication costs, which are annually 590 USD per patient on average, encountered a small percentage of total expenditures, compared with that of hospital services and the loss of public tax. **CONCLUSIONS:** To prevent ACS, health policies targeting risk factors should be emphasized in an effort to improve efficacy and efficiency of cost.

PCV35

COSTS OF TREATING CARDIOVASCULAR DISEASES IN GERMANY: A SYSTEMATIC LITERATURE REVIEW

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OBJECTIVES: Germany reformed its hospital reimbursement scheme to service-based payment to diagnosis-related groups. Hospitals in Germany might be more cost-conscious in treating patients compared to the pre-reform period. This study identified the post-reform individual-level direct medical costs and costs over time of several cardiovascular diseases (CVDs), including myocardial infarction (MI), heart failure (HF), peripheral artery diseases (PADs), and stroke, from the perspective of Statutory Health Insurance in Germany. **METHODS:** A systematic review (January 2003 to May 2012) was conducted in Pubmed, Embase, CRD, TIBORDER, and German dissertation database to identify relevant English or German language publications. **RESULTS:** The search identified 157 publications, of which 10 met the predefined inclusion/exclusion criteria for review: 5 about MI, 2 about HF, 1 about PAD, and 5 about stroke. The direct medical costs of MI were between € 11,672 - 12,372/patient in the 1st year after the event; 50-60% of the costs incurred in the acute phase. During the 13-18 months after the event, the costs were estimated to be € 981/patient. Direct medical costs of severe chronic HF were € 27,700/patient annually. Direct medical costs of hospitalized PAD were € 7,674/patient in the 1st year, including € 4,186 in the acute phase. In months 13-18, the costs were € 1,172/patient. For stroke of all types, direct medical costs in the 1st year were € 11,408/patient, half of which were incurred in the first 4 weeks after the event. For ischemic stroke, direct medical costs in the 1st year were € 17,864 - € 18,517/patient, with 29% incurred in the acute phase. In the subsequent 4 years, annual direct medical costs were € 5,479/patient. **CONCLUSIONS:** In Germany, treating CVDs triggers substantial direct medical costs, especially in the acute phases. Hospitalization and rehabilitation are two major cost drivers.

PCV36

INCREASING COSTS FOR GERMAN SOCIAL HEALTH INSURANCE (SHI) FUNDS BY ABANDONMENT OF PENTAERITHRITYLTETRANITRAT (PETN) FOR PATIENTS WITH CORONARY HEART DISEASE (CHD)? – A COST ANALYSIS BASED ON SICK FUND DATA

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OBJECTIVES: To determine whether there are certain treatment patterns and cost differences in CHD-patients treated with different nitrates. **METHODS:** Full data sets of 4 Million patients from SHI of the years 2001 to 2011 were enrolled to identify CHD-patients treated with different nitrates. Demographic data as well as resource consumption were collected. Events related to CHD were identified. Based on this data a Markov model was created to calculate length of stay on a treatment principle, to calculate costs per treatment principle and to calculate the death rate due to different nitrate treatments. For cost analysis, German SHI perspective was chosen. Drug costs were taken from official price lists of 2012. Future costs were discounted by 2.5%. Sensitivity analyses were conducted. **RESULTS:** More than 1 Million patient biographies were eligible, 14% were CHD-patients and 18,691 (1,85%) patients treated with nitrates were observed. 30 % were male, 20 % on Isosorbidmononitrate (ISMN), 50% on Isosorbiddinitrate (ISDN) and 30 % on PETN. Average starting age was 59.8 years on ISMN, 60 on ISDN and 57.8 on PETN. Demographics were comparable, with more patients living in Eastern Germany. Treatment duration was 16.9 years on ISMN, 16.6 on ISDN and 17.0 on PETN. Mortality rates were 2.5% under ISMN resp. ISDN and 1% under PETN. Total annual costs per patient (excluding hospital costs) were €1,485,- for ISMN, €1,529,- for ISDN and €1,158,- for PETN. PETN-patients receive less additional drugs for CHD, diuretics, psychopharmacotherapeutics and further non-specified drugs. Further analyses indicated that PETN patients are treated more often out-patiently. Sensitivity analyses stated stability of the presented results. **CONCLUSIONS:** Treatment of CHD-patients with PETN is less costly for SHI. Abdication of PETN due to current fictive approval and higher drug costs – as published recently – will lead to prescription of other nitrates and as consequence, higher costs will accrue.

PCV37

VIP STUDY: INCREMENTAL COST DURING HOSPITALIZATION AFTER TOTAL KNEE AND HIP ARTHROPLASTY IN BRAZILIAN HEALTH CARE SERVICES

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OBJECTIVES: To evaluate venous thromboembolism (VTE) rate and incremental costs during hospitalization for total knee (TKA) and hip arthroplasty (THA) in public and private health system. **METHODS:** Retrospective cohort study of patients undergoing elective TKA or THA in 2010. All reviewed charts were from either one public or two private hospitals in São Paulo state, Brazil. Patients were 18+ years old, and excluded from the study if antithrombotic drugs were used prior to surgery. Costs were estimated based on hospitalization resource utilization described in patients' chart. Costs are expressed in 2012 US$. **RESULTS:** From a total of 233 patients, 215 were included: 121 (56.3%) TKA and 94 (43.7%) THA. A total of 203 (94.4%) patients received VTE prophylaxis, being enoxaparin the first choice in 201 (99%). VTE was suspected in 7 (3.3%) cases during hospitalization (4 TKA/3 THA). VTE was confirmed in two cases from private hospitals: one deep vein thrombosis (DVT) and one DVT/pulmonary embolism, both TKA. In the public setting (N=81), length of stay (LOS) and hospitalization average cost per patient were 4.9 (SD3.8) days and US$2,327.12, respectively, in non-VTE group (N=79) while 13 (SD9.0) days and US$3,121.01 in suspected VTE group (N=2). In the private setting (N=134), LOS and hospitalization average cost per patient were 5.1 (SD3.0) days and US$14,006.28, respectively, in non-VTE group (N=129), 15.7 (SD11.3) days and US$22,006.33 in suspected VTE group (N=3), and 22 (SD7.1) days and US$28,232.33 in confirmed VTE group (N=2). **CONCLUSIONS:** In our study, VTE rate was 0.9%, increasing four times the LOS and doubling hospitalization costs (US$ 14,226.05/patient) for the private service when comparing to patients without event. LOS of suspected patients was similarly extended in both health services yet with higher hospitalization cost for the private setting.